Duke

FLYERS ASSOCIATION NEWS

Number 06-3 **November 2006**

Glenn and Pat Kooi

OUR HOSTS AT 2006 DENVER FLY-IN WERE **GLEN & PAT KOOI AND RON KNUDSEN**

REMEMBER: **THE NEXT FLY-IN IS OCTOBER 5-7, 2007 AT SHREVEPORT, LA (Downtown Airport)**

HOSTED BY: **GLEN AND ELLEN ADAMS**

PRESIDENT
Earle Olson
P-352

VICE PRESIDENT
Ralph Cohen
P-412

NEWSLETTER
Jim Gorman
P-596

SPARE PARTS FOR YOUR DUKE

(2) Generators	(1) Tach Generator
(2) Starters	(2) Magnetos
(2) Flap Motors	(2) Landing Gear Motors

Above are located at Aircraft Systems, 5187 Falcon Road, Rockford, IL 61109. They will ship item to you by UPS or Federal Express. You return your part (same day) to them. They will overhaul, charging you for work done, and then item becomes Association emergency part. Phone 815-399-0225.

Electric Boost Pump	**Overhauled Turbo**
Exhaust Transition Pipe	**Oil Cooler (new)**
Lycoming Exhaust Pipe #77429	**Nose Wheel Tire**
Prop Brush 3E1206-2	**Main Gear Tire**
Recognition Bulbs DN25-5	**Prop Spinner (Less Back Plate)**

Above - contact Earle Olson @ P. O. Box 1043, Medina, OH 44258
Phone 330-723-3210 (O) 330-723-9977 (FAX)

Windshields - Contact Gary Bongard @ 952-944-2628

WELCOME NEW MEMBERS

Leroy Del Don, Jr. P-215
N1808W
Patterson, CA

Bob Stevenson P-355
N837RJ
Hobson, MT

Jeff Yusem P-569
N95TR
Aspen, CO

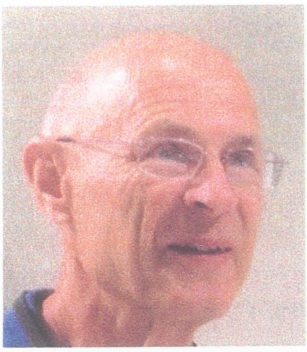
Jeff Sikes
Valdosta, GA

Richard Corey P-527
N6693A
Scottsbluff, NE

Mike Lilja
Shreveport, LA

Roberto Decena P-217
N1025N
Arlington, TX

Scott Frederiksen P257
N126CA
Eden Prairie, MN



Comments from Earle:

Thanks to all who attended and those that made possible a wonderful 17th annual Duke Fly-In. Pat and Glenn Kooi and Ron Knudson did a fabulous job. Those who missed can get an outstanding summary from the web site thanks to Dr. Maurice Miller and his superb write-up.

As promised at the Fly-In, below is a summary of how to stop corrosion before it eats you alive:

The first thing to remember is that most paint shops are accustomed to painting aluminum and may not even know that our tail feathers are magnesium. If they treat it like aluminum, you will end up with a major corrosion problem.

When stripping paint off magnesium, **NEVER USE** a stripper with Formic Acid or any that are not compatible with magnesium.

For small areas try to mechanically remove the paint with plastic scrapers, aluminum sand paper or scotchbrite pads. The use of steel knives or wire brushes can leave small deposits that can react with the magnesium. Do not use emery paper.

THIS IS THE STEP THAT IS SKIPPED BY MOST PAINT SHOPS.

Next use the nitric acid and sodium dichromate solution to STOP THE CORROSION. You may or may not see a bubbling action as you swab this on the exposed area. After one or two minutes, wipe dry then rinse away any residue with distilled water. Repeat this procedure until all corrosion is removed. Thoroughly dry the area with heat lamps or a hair dryer.

DO NOT TOUCH with bare fingers. It contaminates the area. Now you can treat with any of the commercial magnesium conversion products on the market. Dow 19, Magnadyne and Sherwin Williams have one also.

The surface may now be primed with a two part epoxy primer making sure it is not a self etching (because it has acid in it) primer.

Paint and your magnesium surface should be good for a long time.

Remember stopping corrosion when you have small spots will save you thousands of dollars later.

Preparation of the nitric acid solution is extremely dangerous and you must remember never to add water to acid. Always add acid to water. Always use protective eye wear and gloves.

Take one gallon glass or polyethylene container and put in one quart of distilled water. Add the sodium dichromate. Stir and agitate until dissolved. Add 4-1/4 paints of distilled water. Slowly add the full volume of nitric acid and mix thoroughly (1-1/2 pints).

This is a summary and a more complete procedure is available by writing or e-mailing me. Earle Olson, Olson Products, Inc. P. O. Box 1043, Medina Ohio 44258 or earleol@aol.com

Remember this stuff needs to be handled very carefully.

A more complete description of this process is provided in FAA Advisory Circular AC 43-4! "Corrosion Control for Aircraft".

George McCrillis (Oilmatic) Member # 835 is recovering from a serious illness, which has delayed shipment of his pre-oilers. We wish George a complete recovery, and we look forward to seeing him back soon.

Turbine Duke #5 will be scheduled for member # 864, Jeff Yusem.

2006 DUKE FLY-IN

Pat and Glen Kooi, along with Ron Knudsen, did a great job of hosting our 17th Fly-In at Centennial Airport Denver for the third time.

Friday evening dinner was held at Wings Over Rockies Museum located at Old Lowery Air Base. A truly wonderful collection of military airplanes was on display. Many had a chance to fly the Wright Flyer Simulator (most of us crashed).

Saturday morning began with a report the Association bank balance is over $20,000, and we are accumulating spare parts (see page 2). Membership is steady at around 325. Re-elected were President Earle Olson, Vice-President Ralph Cohen and Secretary Treasurer Marge Gorman.

Discussion on next year's Fly-In resulted in selection of Shreveport, LA, on October 5-7, 2007.

Bill Passey reviewed the insurance market, which has been volatile of late. Annual recurrent training is required by most all companies. Bill commented that the US Specialty has Lion's share of the business. Single limit is the preferred policy. Most limits are one million with excess available in some cases.

Darwin Conrad of Rocket Engineering informed the group four airplanes have been completed including Dane Scag's #1, which was on hand and made many flights—thanks to Dane. He reports being very pleased with the airplane and quoted 280 KTS at 65 GPH.

Gary Bongard reported the complete replacement of tail feathers on Stan McNabb's P-595, which was on display. Catching corrosion early is most important. See *Comments from Earle* on page 3. Gary also reported paperwork for STC approval of lifters has been sent to the FAA for processing.

Ray Frankenberg and his son gave an interesting presentation on oils. Ray feels the current Shell 15-50 includes an additive which allows varnish build up on the piston pin and he had several examples to show. They believe a combination of Phillips XC and Lycoming additive is beneficial to engine life. Jim Gorman commented they now have over 5000 hours of Lycoming engine time with no lifter problems. Jim seconded Ray's comment with the added suggestion you follow Paul McBride's rules for operation of the 541 engine (see Newsletter 06-01, page 7).

Drew McEwen, Vice-President Customer Support Raytheon, gave the good news they will continue to support the Duke. However, there will be a delay for one-off parts.

Al Uhalt stated he operates his electric boost pumps on a continual basis and sees a reduction in GPH usage. This prompted a remark that we need to have more pumps in our parts stock.

Subject of long vs. short oil filters was again discussed. It was reported champion units have a new and better filter media. Inquiries made at Oshkosh of Champion resulted in their comments, "Use of short filter with oil change at 30 hours is very logical."

A very informative tour of Jeppesen-Sanderson included information on charts and their printing process.

Adam Aircraft Tour was more than interesting. Production of the piston 500 was underway and excellent quality was evident. Also noted was the 700 which was in constant experimental local flights.

Saturday night banquet in Kooi's hangar was most enjoyable and in a wonderful setting; excellent food served on white table cloths capped a great weekend.

To top it off was Tom Clement's presentation, World Flight 2001, taking us around the world in a King Air 200.

To Pat, Glen and Ron, many thanks for an excellent Fly-In!

Following Comments are Marc Franklin's problems en-route to 2006 Fly-In:

I am an instrument and multi-engine rated private pilot with over 3700 hours total time and about 2000 hours in type.

The IFR flight in N242 MF from KBNA to KICT was piloted by me alone with no passengers. I departed Nashville with full fuel around 0930 Central Time, topping IMC conditions above 6000 MSL. Climbing to FL 200, 242 MF was given "direct Wichita". After a descent to about 4000, I was cleared for the visual 19L and instructed to contact ICT Tower. Tower cleared me to land.

After approach flap deployment and about 160 knots, I placed the landing gear handle in the "down" position. Less than one second later I heard a very loud "bang" type noise accompanied by a moderate smoke smell in the cabin. The latter dissipated in a minute or two.

It was then obvious that gear extension was not accomplished. This was evidenced by the continued illumination of the red transition light and the fact that no down and locked green lights were observed.

I then declared an abnormal situation to ICT Tower indicating a landing gear extension problem. Tower returned me to ICT approach who provided me with radar vectors and time to sort out the problem.

Following the emergency gear extension checklist, I was unable to turn the hand crank more than one or two turns. It seemed stuck. With no other options apparent to me, I then pushed the gear circuit breaker back in and put the landing gear switch back to the "up" position.

The landing gear then appeared to retract as evidenced by the extinguishment of the red transition light. I then put the gear handle down again. The gear began to extend but stopped well short of down, as indicated by the continued illumination of the red transition light and no green lights visible.

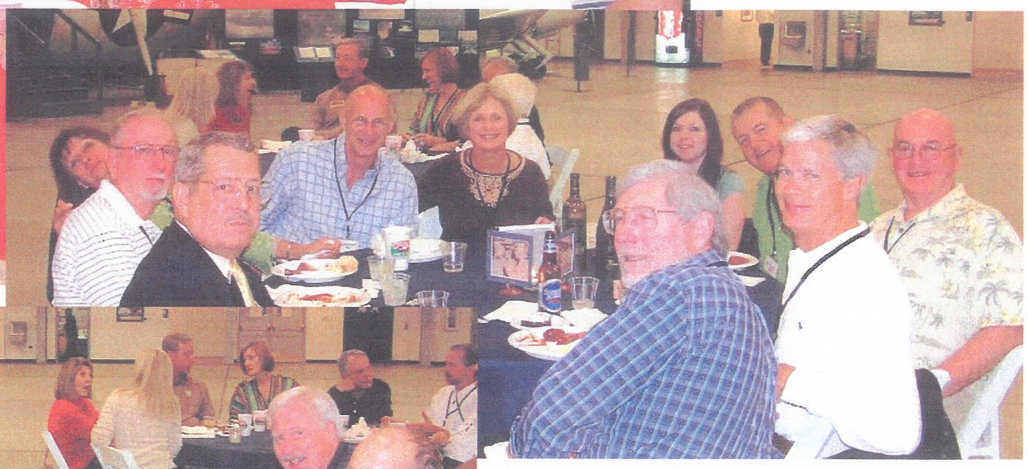
Once again, I followed the emergency landing gear extension procedure. Raising the gear must have loosened something that had obstructed the first manual gear extension attempt, because I was able with two hands working at peak of energy expenditure to achieve two green lights but not the third, indicating that the right main was not completely down and locked.

The amount of force needed to turn the manual gear crank handle in order to achieve the two green gear annunciator lights was considerably greater than the force needed for the practice emergency gear extension procedure as performed every year while flying with my Duke trainer.

Following a low fly-by, ICT Tower indicated that the gear appeared to be down, although another party suggested that the right main was not fully down. All things considered, I decided to land the plane after the next approach to runway 14.

Following a slow approach and touchdown and holding left aileron to keep weight off the starboard side, the landing appeared to be normal until speed went below about 30 knots, whereupon the right main collapsed permitting the right prop and wing to touch the ground. The plane then skidded to the right off the runway and onto the grass. It came to a stop approximately 180° in the opposite direction despite full left rudder. No fire ensued.

I was not injured except for a sore right hand and several spots of rug burn on the fingers of both hands caused by the extremely difficult job of turning the emergency landing gear crank handle as far as it would go, the crank handle being so close to the cabin floor.



Pictures by Dr. David Malin, Mbr. #845

If anyone would like a CD of all the pictures from the fly-in, please contact David at dbm@earthlink.net